1980

sinclair
ZX80

Personal Computer System

Computers
Application Programs
& Accessories

IMAGE COMPUTER PRODUCTS, INC.
615 ACADEMY DRIVE, NORTHBROOK, ILLINOIS 60062 312/564-5060

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PERSONAL COMPUTING SINCLAIR ZX80 STYLE . . .

Only a few years ago, computers as powerful as the ZX80 cost thousands of dollars. Ten years before that, only very large corporations, universities, or governments could even afford to have their own "personal" computer.

Most of this computing power has been used in business to write the checks, print the bills, and count the money. These business machines are still very large and expensive, but they aren't any smarter than the computer you can hold in your hand today. In fact, much of the expense of these systems is in memories and other information storage.

With the ZX80, an audio tape recorder replaces the large tape and disk storage of business computers. While you won't be able to run a bank or control a space shot, you will be able to store many smaller programs to help keep track of your money, figure your taxes, and even compute interest rates for a personal loan.

Business and financial calculations are only two of the many things you can do with your computer. In preparing this catalog we considered hundreds of programs including electronic games, video art, educational programs, graphic displays, and a wide variety of new applications. These programs are not only fun, they will help you understand computers and what they do.

Like cooking, model building, and other hobbies, programming your own computer is a rewarding experience. If you're really curious and would like to see how programs are written, the ZX80 is an ideal learning tool. Writing programs in BASIC is an easy skill to learn. Good programs, like good stories or paintings, take time to develop.

Whether you use your personal computer to play back other people's software or as a tool for creating your own, we hope you continue to discover that computers are interesting, challenging, and fun . . .

Dick Ainsworth
Creative Director
**Image Computer Products, Inc.**

Sinclair Research Limited

Sinclair Research Ltd., first introduced the ZX80 in Britain early in 1980 and an improved version began being sold in the U.S. in September.

Soon an extended BASIC language ROM and memory expansion box will greatly increase the power of the ZX80 and extend its computing capability to support more complex technical and scientific applications.

As the power of the ZX80 increases Sinclair will continue to provide accessories and peripherals designed to meet the expanding needs of ZX80 owners.

Clive Sinclair, founder of the company, invented the World's first pocket T V and pocket calculator in the early 1970's. And now the smallest and lowest priced expandable personal computer system has been developed by Sinclair.
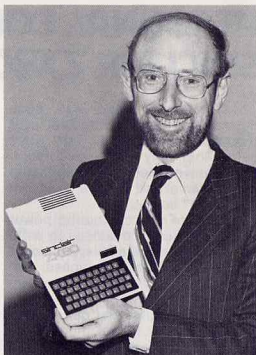
Clive Sinclair, inventor of the world's first pocket TV, the pocket calculator, and now the ZX80 Personal Computer System, began his career in electronics as a technical journalist and in 1962 began producing radio and amplifier kits. His company has now evolved into the computer manufacturer responsible for the ZX80.
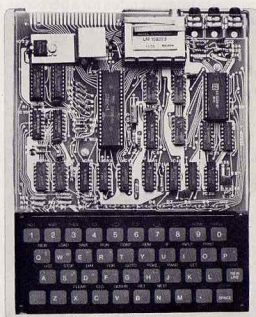
Image Computer Products, Inc.

Images' publishing background began ten years ago and now the company is considered one of the leading developers and publishers of microcomputer software in the world.

The strength of the company has been its publishing and marketing expertise combined with a total commitment to providing quality products and services.

Image currently occupies three locations in the Chicago, Illinois area which handle product development and publishing services, tape and disk duplication, printing, packaging and shipping. With total resources of more than 70,000 sq. ft. of production facilities and 80 employees, Image maintains the ability to keep up with the exploding microcomputer software marketplace.
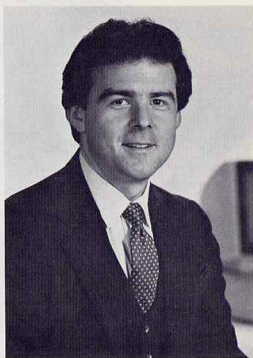
Bill Moulds, President of Image, has spent the last 15 years in marketing and communications for technical products and is totally committed to providing customers with unequalled quality and service.

The ZX80 Personal Computer

Only $199.95

The Sinclair ZX80 is an extraordinary personal computer. Compact and briefcase-sized, it weighs just 12 ounces. Yet in performance it matches and surpasses systems many times its size and price.

The ZX80 is an advanced example of microelectronics design. Inside, it has one-tenth the number of parts of existing comparable machines. This unique design - packing the system onto fewer, more advanced LSI chips - gives the ZX80 its remarkably low price.

Along with a complete 128-page course in BASIC programming, the ZX80 comes with all the necessary cords for connecting to standard color or B/W televisions and cassette recorders.

Dimensions

    Width 174mm (6.85in)
    Depth 218mm (8.58in)
    Height 38mm (1.5in)
    Weight 300g (10.5oz)

Microprocessor/Memory

    Z80A 3.25MHz clock
    ROM: 4K bytes containing BASIC
    RAM: 1K bytes internal, externally expandable to 16K bytes.

Keyboard

40 key touch-sensitive membrain with keyword entry gives an equivalent of 62 keys. After entering the statement number, the next key you touch enters the keyword printed above it automatically.

Display

Requires an ordinary domestic black and white or color TV. The lead supplied connects between the ZX80 and your TV's antenna leads. The display is 24 lines of 32 characters per line showing black characters on a white screen.

TV standard

The ZX80 is designed to work with VHF channel 2.

Syntax check

The syntax of the entered line is checked character by character. A syntax error cursor marks the first place the syntax breaks down if there is an error. Once any errors have been edited, the syntax error cursor disappears. Only syntax error-free lines of code are accepted by the ZX80.

Graphics

A total of 22 graphics symbols gives 48 x 64 pixels resolution consisting of 10 symbols plus space and inverses. Includes symbols for drawing bar charts. Under control of your BASIC program any character can be printed in reverse field.

Editing

A powerful line editor allows you to edit any line of program or input including statement numbers. The edit and cursor control keys are EDIT, RUBOUT, HOME, left arrow, down arrow, up arrow, right arrow.

Arithmetic

The arithmetic operators are +, −, x, / and exponentiate. The relational operators are <, >, and =, yielding 0 or −1. The logical operators AND, OR, and NOT yield boolean result. Relational operators also apply to strings. ZX80 BASIC uses 16 bit two's complement arithmetic (32767).

Immediate mode

The ZX80 will function in the "calculator mode" by immediately executing a statement if it is not preceeded with a line number.

Expression evaluator

The full expression evaluator is called whenever a constant or variable is encountered during program execution. This powerful feature allows you to use expressions in place of constants and is especially useful to GO TOs, GO SUBs, FOR ... NEXT etc.
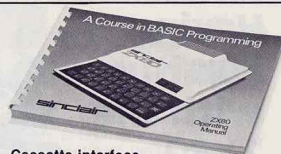
Cassette interface

The ZX80 works with almost all domestic cassette recorders. The transfer rate is 250 baud using a unique tape-recording format. Other systems are not compatible with the ZX80's. The ZX80 also SAVEs the variables as well as the program on cassette. Therefore, you can save the data for updating next time the program is executed. The ZX80 does not support separate data files. The lead supplied with the ZX80 is fitted with 3.5mm jack plugs.

Variables

Numeric variable names may be any length, must begin with a letter and consist of alphanumerics. Every character in the name is compared; thus, an infinity of unique names is available.

String variables may be assigned to or from, shortened but not linked together. String variable names are A$-Z$. Strings do not require a dimension statement and can be any length.

Arrays have a maximum dimension of 255 (256 elements) each. Array names consist of a single letter A-Z.

Control variable names in FOR ... NEXT loops consist of a single letter A-Z.

Power supply

The ZX80 requires approximately 400mA from 7-11vDC. It comes with a power supply which connects to standard 110VAC house current.

5900-Wt.4 lbs.-Shpg.$5.00 ... **$199.95**

Having Fun with the ZX80

Money Sense By: Les Multack

Checkbook Calculator - Here is the program to help you deal with that monthly bank statement. Finally, you can have a computer on your side in the battle over the balance.

Budget Analyst - Where should you spend your money? This program uses recursive analysis techniques to help you gain control over your monthly finances.

4K integer BASIC, 1K user memory
5101-Shpg.$.50 . . . . **$6.95**

Time Machine By: Les Multack

Perpetual Calendar - What day were you born on? What does the calendar for January 2000 look like? This program will display any month for any year of the Gregorian Calendar.

Time Calculator - Use this program to add and subtract any combination of days, hours, minutes, and seconds. Can be used to determine the various starting times for a complex meal or the material usage in flow processes over time. This program plugs the hole left by most hand-held calculators.

4K integer BASIC, 1K user memory
5102-Shpg.$.50 . . . . **$6.95**

Games of Strategy By: S.P. Murphy

Snark - Find the clever snark hiding in a nine by nine field. He's tricky, so make your guesses count!

Mugwump - He's hiding in the mud. See if you can find him sooner than a friend. What is your strategy?

Concentration - You and your opponent try to match pairs of numbers on a four by four grid. The person getting the most points wins.

4K integer BASIC, 1K user memory
5103-Shpg.$.50 . . . . **$6.95**

Dollars and Dice By: S.P. Murphy

Dungeon Dice - This program is a must for Dungeon Masters. Will roll any number of Dungeon and Dragon™ dice and provide the results.

Craps! - Here is the classic dice game. Can you beat the house, or will the computer beat you?

Slot Machine - Get three in a row to win big! Or get a lemon and your winings turn sour. Can you beat the odds?

4K integer BASIC, 1K user memory
5104-Shpg.$.50 . . . . **$6.95**

Storyland By: S.P. Murphy

Two Stories - These programs are for the young at heart. Just answer the questions for your very own story. Your kids will love them - and so will you.

Adlib Times Two - These two program situations are made up by you and your party guests. A great ice breaker. Answer the computer's questions and beware the results!

4K integer BASIC, 1K user memory
5105-Shpg.$.50 . . . . **$6.95**

Game Room By: Larry Fiarman

Reverse esreveR - Ten scrambled digits on your TV. How many turns does it take you to put them right? You will find it is harder than you think.

Who's Got the Button? - A group of people are sitting in a circle. One of them has a button. Can you find out who?

Last Man Out - Pick the number of objects and the most that a person can remove at a time. The computer keeps score as you and a friend see who can win.

Digits - The ten digits are face down on the screen. See how many turns it takes to turn them face up. But beware, the computer gets to flip one every time you do!

4K integer BASIC, 1K user memory
5106-Shpg.$.50 . . . . **$6.95**

from Creative Computing...

Dealer's Choice

Acey-Deucy - Player gets two cards, bets on whether the next card will be between the first two.

Number - Guess a number between 1 and 5. The closer you get the higher the payoff.

Chuck-A-Luck - Pick a number from 1 to 6. Roll three dice and get paid off each time you match.

4K integer BASIC, 1K user memory
5107-Shpg.$.50 . . . . **$6.95**

Strategy Moves

Depth-Charge - Give the machine X, Y, and depth coordinates to fire charges and sink the enemy sub.

Hurkle - A Hurkle hides on a 10 x 10 grid. Players get five turns to find the Hurkle using compass directions.

Magic Square - In a 3 x 3 grid, players and computer alternate to form rows and columns totalling 15.

Not One - Players and the computer take turns rolling dice until they match 2 numbers or bust.

4K integer BASIC, 1K user memory
5108-Shpg.$.50 . . . . **$6.95**

Computer Challenge

Stars - The computer selects a number from 1 to 100. The closer you get in 7 guesses, the more stars.

Batnum - Player and computer take turns picking from a pile of objects until there is a winner.

Nichomacus - Select a number from 1 to 100. The computer asks for the remainder after the number is divided by another number.

Reverse - Start with digits 1 through 9 randomly ordered in a line. Reverse from 2 to 9 of the numbers trying to get the numbers in order.

4K integer BASIC, 1K user memory
5109-Shpg.$.50 . . . . **$6.95**

Computer Learning Lab

By Dick Ainsworth
with
Copper Giloth and
Tom DeFanti

This set of experiments and programs makes it easy and fun to see how your computer works and some of its capabilities. You will discover how to solve math problems, create video games, and even make graphic designs on your TV screen.

You will begin each lesson with a few short experiments. Then you will build a computer program that you can run and use to solve problems. Each lesson ends with a long program that will become part of your permanent reference library.

Learn About Computers

With Computer Learning Lab, you learn by example as you discover the many things your computer can do.

Each lesson contains several experiments that show you important features of, and clearly illustrate, your computer's capabilities.

Watch the mystery evaporate as you build your own programs and begin actually using the ZX80 to solve problems, create games, and impress your friends.
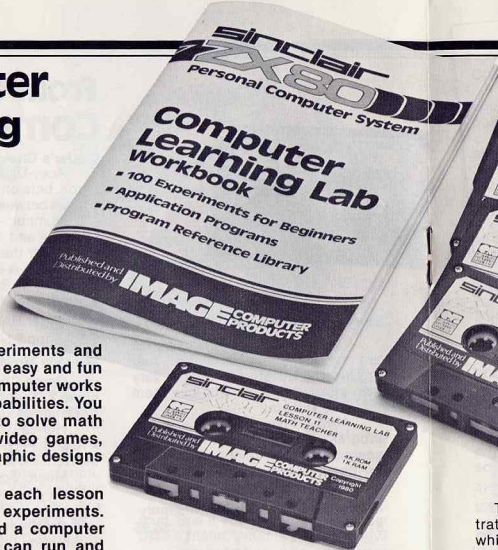
For Beginners and Experts

You can also use the lab to help you understand how large, industrial computers operate and affect our lives. Or, let this be your personal introduction to creating your own software.

The learning lab is easy enough for beginners to master — yet the full scope of this reference library will even appeal to professional software designers.

Each lesson begins with fundamentals that are clearly illustrated and easy to understand. The final examples show how advanced programming techniques are actually based on the principles covered in the experiments.

The beginner will find an illustrated encyclopedia of software which is organized to show what computers do and how they do it.

For the expert, these same programs provide a complete, cross-indexed guide to programming applications, ideas, and concepts.

Family Learning Experience

Until the Sinclair, a fully programmable computer was far too expensive to be your personal learning machine. Now there's no easier way for the entire family to learn about computers.

This interactive laboratory uses the full power of your ZX80 to make computers fun and easy to understand from the very beginning.

The illustrated workbook provides many evenings of fun and entertainment while providing the perfect learning tool for children and adults.

Complete Software Library

Twelve complete programs on cassette tapes illustrate the key features of the ZX80.

● See how any formula may be copied in a program that automatically solves math problems.

● Learn how random numbers are used to create unexpected results in games.

● Try your hand at beating the computer, and see how you can adjust the computer's skill to give you an equal match.

● Use the ZX80 for estimating the paint or wallcovering needed for any combination of rooms.

● See how computers sort information into numerical or alphabetical sequence.

● Break secret codes; or, create puzzles for the computer to solve.

● Use the graphic capability of the ZX80 to create graphic designs, patterns, and video art.

● Improve math skills with an automatic teacher that creates continuous lessons.

● Instantly convert any quantity, such as English to metric or dollars to yen.

● See the laws of chance actually operate with automatic dice.

● Automate ancient games of skill and try your hand at beating your opponent — or challenge the ZX80.

● Easily solve "word" problems by converting them to simple programs.

The complete Computer Learning Lab contains the illustrated workbook and six lesson cassettes. Two blank program cassettes are also included for recording and saving your own programs.

Workbook and lesson tapes
5100-Shpg.$1.50............. **$49.95**

Products from LINSAC

THE ZX80 COMPANION

(SECOND EDITION)

LINSAC

THE MONITOR REVEALED

The ZX80 Companion by
Bob Maunder,
Terry Trotter,
and Ian Logan.

This book arose from the authors' experience in obtaining one of the first ZX80 kits and through many hours of use at home and in the college classrooms. It is intended to be a manual for the broad spectrum of ZX80 owners, from the electronics specialist wanting to learn about microcomputers, to the computer professional buying his own system for the first time, and most particularly to the person wanting to use a computer in his own home.

The manual is arranged so an intended user of the ZX80 entering computing for the first time may start using the system quickly, and then gradually gain a better appreciation of the machine and its facilities. The informed computer user will find the later section particularly useful in applying his knowledge to the ZX80.

132 Page Book
5200-Shpg.$1.00 . . . . **$19.95**

Pre-recorded cassette tapes

Simulations

Plain Sailing - Steer a yacht against dangerous currents.

The Maze Game - Find the treasure as the maze grows around you.

Battleships - Recreate the adventure of the open ocean with this simulation of realistic naval artillery action.

4K integer BASIC, 1K user memory
5201-Shpg.$.50 . . . . **$6.95**

You Against the Computer

Noughts & Crosses - The ZX80 plays the game of Tic, Tac, Toe.

Hurkle - The computer has hidden a horrible Hurkle in a 15 x 15 field. Can you find it in time?

Chinese Puzzle - The ZX80 has confused the blocks, can you arrange them correctly?

4K integer BASIC, 1K user memory
5202-Shpg.$.50 . . . . **$6.95**

Classics

Mastermind - Break the four-digit code; logical thinking is required.

Nim - Here's the classic computer game. Can you win it?

Tower of Hanoi - The game of antiquity!

Nine Lives - The word game for two players - possibly fatal.

4K integer BASIC, 1K user memory
5203-Shpg. $.50 . . . . **$6.95**

Having Fun!

Number Guessing - Find the hidden number with hints from the ZX80.

Three Towers - Rearrange the ringed towers to build a new tower.

Symbol Simon - Try and match the increasingly complex pattern. It's harder than you think!

Sketcher - Have fun drawing patterns of your choice on the TV screen.

4K integer BASIC, 1K user memory
5204-Shpg.$.50 . . . . **$6.95**

Larger Games

Fruit Machine - The ZX80 becomes a one-armed bandit. Get three in a row and hit the jackpot.

Four-in-a-line - For two players: get four in a row to win.

Zombies - You are surrounded by Zombies in a desert island. Can you survive?

4K integer BASIC, 4K user memory
5205- Avail. soon . . . .

Math and Music Tutors

Math Drills - Teach math facts with two levels of difficulty.

Number Bases - Learn base arithmetic facts with this number base converter and calculator.

Music Notes - Help your students learn the notes of the musical scale with this program.

4K integer BASIC, 1K user memory
5206-Shpg.$.50 . . . . **$6.95**

Making Learning Fun

Dot Recognition - Quick! How many dots on the screen? This program trains your pattern recognition abilities.

Spelling Quiz - Use this program to help your students with spelling problems. Learn to spell a selected set of words.

Day Finder - This program will tell you the day of the week you were born, or your four- hundredth birthday!

Prime Factor - Learn how numbers are formed by multiplying together smaller numbers.

4K integer BASIC, 1K user memory
5207-Shpg.$.50 . . . . **$6.95**

The Math Professor

Graph Plotter - Plot quadratic equations on your TV with this program.

Bar Charts - Give the ZX80 your data and it will prepare beautiful bar charts for you.

Statistics - Here is a useful collection of statistical routines for you and your ZX80.

4K integer BASIC, 1K user memory
5208-Shpg.$.50 . . . . **$6.95**

Utilities for your ZX80

Memory Display - Use this program to display computer memory in 80 byte blocks of character and hexadecimal.

Hex Code Monitor - This program helps you handle machine code routines.

Renumber - Here is a full renumber routine for your ZX80 BASIC programs.

Memory Search - Use this program to search for and display byte patterns in memory.

4 integer BASIC, 1K user memory
5209-Shpg.$.50 . . . . **$6.95**

30 Programs for the ZX-80

from Melbourne House

This collection of thirty 1K programs ranges from entertaining educational games to artificial intelligence simulations. Every ZX80 owner will find this complete program library useful and fun.

The thirty programs are available in one complete text or conveniently recorded on cassette tapes. Each cassette contains up to four programs with operating instructions and a flow diagram and description to aid you in understanding how each program actually works.

112 Page Book
5800-Shpg.$.1.00............ **$14.95**

Pre-recorded cassette tapes
Classic Computer Games

Lunar Lander - Control a Lunar mission that lands you safely on the moon.

Mazes - This program generates an ever changing pattern of mazes.

Life - A version of the famous program which graphically portrays the effects of population.

Mastermind - Choose the level of complexity in this classic game.

4K integer BASIC, 1K user memory
5801-Shpg.$.50............... **$6.95**

"This book is excellent",
Clive Sinclair, President,
Sinclair Research,

Simply Useful

Bubble Sort - Use this subroutine to sort numeric data in your own programs quickly and easily.

Line Renumbering - Load this into memory before entering your own program and you can use it to renumber your program at any time.

Machine Code - Use this program to write short machine language routines which can be called from your own BASIC programs.

Memory Left - Use this short routine while writing your own programs to keep track of how much room is left in memory.

4K integer BASIC, 1K user memory
5802-Shpg.$.50............... **$6.95**

Playing Against the Computer

Chinese Remainder - The computer reads your mind and tells you the secret number.

Noughts & Crosses - Make one mistake in this traditional game and the computer will beat you.

NIM - This is a strategic race against the computer to see who will get the last match.

Blackjack - Sharpens your strategy for a trip to Las Vegas with this simulated card game.

4K integer BASIC, 1K user memory
5803-Shpg.$.50............... **$6.95**

Games Kids Love

Simple Simon - With the aid of nice graphics, this game generates a random sequence of letters.

Chomp - A multiple player game that ends with the loser taking the poisoned last bite.

Leap Frog - This is a good test of your logic while being a very clever game at the same time.

Pinch - An interesting "Othello-like" game with varying results.

4K integer BASIC, 1K user memory
5804-Shpg.$.50............... **$6.95**

Time and Number Machine

Prime Numbers - This program generates all the prime numbers from 2 to 300.

Day of the Week - If you're bashful about your age, stay away from this program.

Simultaneous Equations - This program solves simultaneous linear equations like $ax + by + c = 0$.

Square Root to Three Places - Calculate the square root of any number to three decimal places.

4K integer BASIC, 1K user memory
5805-Shpg.$.50............... **$6.95**

The Teaching Computer

Math Drills - Give your child a taste of Computer Aided Learning.

Hangman - Guess the secret word or you become a hangman.

Capitals of the World - Use this game to learn capitals, or history.

Bridge Bidding - This program will deal you a Bridge hand and ask you to make an opening bid.

4K integer BASIC, 1K user memory
5806-Shpg.$.50............... **$6.95**

Playing with the ZX80

Encoding - Create code which can be broken only by a ZX80 owner.

Draw a Picture - Play with shapes and graphic characters.

Pontoon - A two player version of Blackjack with the wasted cards not affecting the outcome.

Horse Race - Spend a day at the races with your ZX80.

4K integer BASIC, 1K user memory
5807-Shpg.$.50............... **$6.95**

Artificial Intelligence

Gomoku - Play against the computer in this version of an ancient Japanese game.

Dr. ZX80 - A computer analyst, and like some analysts, this one doesn't listen to a word you say.

4K integer BASIC, 1K user memory
5808-Shpg.$.50............... **$6.95**

Accessories and Peripherals

Sinclair Heat Transfers

Be the first person on the block to have a ZX80 on your chest. Each transfer comes with the necessary vocabulary to indicate if you are a "Data Processing Wizard" or the "President of Information Systems." Permanent and washable, they are easy to apply with a household iron in minutes, to almost any fabric.

5903-Shpg.$.50 . . . . **$2.95**

5904-Shpg.$.50 . . . . **$2.95**

Quality Program Cassettes

Each C-20 program cassette contains the highest quality, ultra dynamic tape, with a reinforced, high impact, polystyrene shell. In addition, each cassette is enclosed in a shatter-proof protective case to keep your recorded cassettes clean and protected from damage.
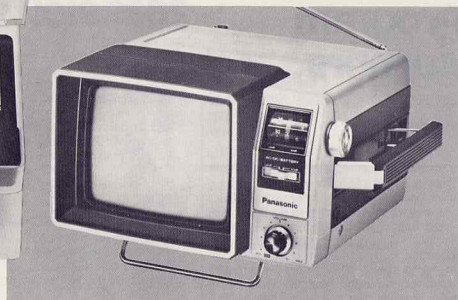
5901-Shpg.$1.50 (6-pack) **$15.95**

Extra Sinclair ZX80 Operating Manuals

This 128-page course in BASIC programming is packaged in every ZX80 and has been written so the beginner will find it easy to learn from and remember the most widely-used computer terms and commands.

The ZX80 guide balances theory with practice, it makes learning exciting and enjoyable. This book will help you run programs with confidence and competence. One Operating Manual is included with each ZX80 computer at no charge.
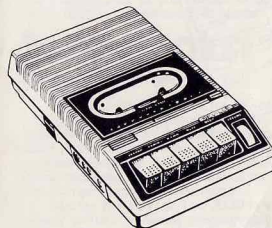
5905-Shpg.$.50 . . . . **$5.95**

## Program Player and Recorder

The Seville Model 4601 Solid State Tape Recorder with Built-in Condenser Microphone is ideal for recording both sound and digital data. Its many outstanding features include push button control, automatic level control, condenser microphone, battery or AC/DC operation, earphone and built-in auto-stop. Priced at only $29.95, the Seville Model 4601 is an excellent recorder suitable for storing and retrieving your Sinclair ZX80 data.

5946-Wt. 3 lbs.-Shpg. $3.00 . . . . . .**$29.95**

100% Solid State B/W Portable TV

The Panasonic TR-7000 black and white TV is an excellent companion for use with your Sinclair ZX80. Its 7" diagonal measure screen makes both programming and viewing a pleasure, and it's light enough to take almost anywhere (car cord included). Other features include AC/DC/Battery operation, self-contained "D" size battery, UHF/VHF continuous electronic tuner and unipotential antenna, earphone and a one-year limited warranty. (Works with the Panasonic TY-370 rechargeable battery pack.)

5970-Wt. 14 lbs.-Shpg. $6.00..**$164.95**

Free ZX80 Schematic

With every order of $10.00 or more from this catalog, you can receive at no charge a complete, detailed schematic of the ZX80 computer if you indicate it on the order form.

Program Authors....
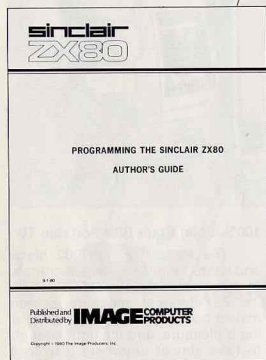
Sinclair Research Ltd. has selected Image Computer Products to publish all software to be introduced and sold with the ZX80 in the U.S. and Europe.

As a publisher, Image Computer Products is open to receiving and reviewing programs which have been submitted by talented authors from all over the world.

If you have two, three or four programs running on the ZX80 that you would like to submit for publication, please write to Al Baker, Programming Director, for a copy of our Author's Guide before sending them in for our review.

Image Computer Products, Inc.
615 Academy Drive
Northbrook, Illinois 60062
Attn: Al Baker,
    Programming Director
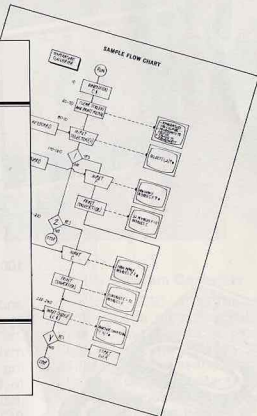
New Releases

SOLITAIRE PEGS

Crossfire - How many moves will it take to exchange eight white pegs for eight black pegs moving only one at a time into a vacant hole? See if you can do it in 46 moves!

Puzzler's Triangle - Similar to the ancient game of Chinese Checkers, a cleverly executed series of jumps is all that is needed to win.

4K integer BASIC, 1K user memory
5110 - Shpg. $.50...............................$6.95

ODYSSEY IN SPACE

2-D Lander - You are in command of a very dangerous lunar landing mission. The situation is crucial—fuel is low and the force of gravity is strong! Be careful not to crash!

Space Docking - Maneuver your space shuttle skillfully through the narrow docking port, or you'll crash or be lost forever in two dimensional space.

3-D Target - Somewhere, out in the fog, hovers an enemy helicopter. From your artillery post on top of a large tower, search out the chopper and fire. Compete with friends for the closest shot.

4K integer BASIC, 1K user memory
5111 - Shpg. 1.50...............................$6.95

ADVANCED GAMES

Roman Checkers - Play this classic game of strategy against a friend or your ZX80. Surround your opponent and take over the 8 x 8 grid to win! The program is written in machine language and operates very quickly.

Life - In only fractions of seconds this classic machine language program graphically displays genetic patterns. Accept the challenge and develop new patterns (it is possible!), or use those suggested in the game.

4K integer BASIC, 1K user memory
5112 - Shpg. $.50...............................$6.95

New Books

Making the Most of Your ZX80
By Tim Hartnell

The perfect book for both the novice and experienced programmer. For the beginner, it offers an excellent way to learn BASIC programming; the more experienced user will find over sixty programs designed to further enhance any previous programming knowledge.

Making the Most of Your ZX80 is a clearly written, enjoyable programming manual. The programs contained in the book consist mostly of games, with some new versions of ZX80 favorites. It also includes the program, "Amazing Active Display," which displays the moving graphic capabilities of the ZX80. While the programs start on a relatively simple level, more difficult programs are gradually introduced, providing an enjoyable, almost effortless learning method.

The book includes special sections on building your own personal program library, using the ZX80 as an effective teaching aid, and incorporating subroutines. It also includes an invaluable appendix of useful ZX80 facts.

108 Page Book
5113-Shpg. $1.00...............................$15.95

The ZX80 Pocket Book
By Trevor Toms

Designed to appeal to the more experienced ZX80 user, *The ZX80 Pocket Book* helps you develop and improve programming skills. Its emphasis on illustrating and understanding statements and commands enables you to utilize the full potential of your ZX80 computer.

The ZX80 Pocket Book is an excellent reference book containing seven new programs as well as helpful hints on program writing, graphics, cassette use and program efficiency. Special sections deal with the BASIC command, instruction and character code sets, graphics, error codes and subroutines. A complete command summary is also included.

The programs range from games, such as, Mastermind, Reverse, Space-Docking, Putting, Hangman, and Wumpus, to those of a more serious nature, such as, Share Valuation and Machine Code Conversion.

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